

ABSTRACT

Title: Specific changes on feet of rhythmic gymnasts and possibilities of physiotherapeutic influence of the feet with the help of a movement program

Objectives: An objective of the thesis is to assess a function and specific changes on feet of rhythmic gymnasts and to demonstrate a positive influence of a movement program on these changes and the deteriorated function of the foot. To summarize the results of existing studies focused on influencing of proper function of the foot and to gain useful information from this experiment not only for physiotherapists, trainers and modern gymnasts but also for laical, actively sporting public which exhibit the same issues with the foot area

Methods: The main essence of this scientific-research quantitative study is an influencing of deteriorated function and specific changes on feet of rhythmic gymnasts with the help of a movement program. The program was performed after each practice (i.e. 4 times a week) through the course of 3 months. 10 probands in the age from 14 to 17 years participated in the program. The experiment was based on the method of a comparison of 2 questionnaires and an entrance and exit kinesiological analysis, the part of which was also a test according to Véle (with visual control/without visual control) and a plantogram. For their evaluation was used a Wilcox test which compares two measurements and serves to determine of a statistically significant or insignificant difference

Results: Experiment demonstrated that after 3 months of an intensive movement program positively influence not only most of the specific changes on feet of rhythmic gymnasts, as for instance longitudinal and transverse flat foot pain or insteps and heel pain, but also their function which includes the stability or active movement of toes. During the stability examination by Véle test (without visual control) was found out that all of the gymnasts demonstrated an improvement of the stability by one level. A positive influence of a movement program on flat foot was also proved by a plantografic examination which demonstrated the improvement by one level for most of the gymnasts. Movement intervention should therefore become a part of their everyday practice

Keywords: foot, rhythmic gymnastics, hypermobility in sports, foot function, specific changes on feet, flat foot, Vélé test, plantogram, physiotherapy, preventive movement program